Restricted Circulation

This paper is not an official document; it is for information only and reference cannot be made to it in any printed publication without the permission of the author.

Agricultural Memorandum No. 298

Forecasting the peak hatch date of Nematodirus larvae from 1ft earth temperature data

L. P. SMITH

Ag. Mem. No. 295 gave peak hatch dates which were the actual days when the largest count was taken. Revised dates were obtained by interpolation.

It was found that April earth temperatures did not help towards determining a better forecast peak hatch date. The procedure of Ag. Mem. 297 was therefore repeated using March data.

1. March 1st-15th data $177 - 3.9\ T_{15}$

2. March 1st-20th data $182 - 4.0\ T_{20}$

3. March 1st-25th data $178.5 - 3.9\ T_{25}$

4. March 1st-31st data $203.5 - 4.5\ T_{31}$

The formulaewere derived from nine years data between 1955 and 1967.

Tests were made on 1968 (Cockle Park) and 1969 (Durham) data

Considering the difficulty in identifying the peak date when only weekly (at best) sampling was available, the results are not discouraging.

/Results

G.04071/SS/12/69/60

Results

Year	Actual peak hatch		Forecast peak hatch date made on			
	Field	Experiment	March 15	March 20	March 25	March 31
1955	May 8		May 12	May 11	May 11	May 13
1956	Apr 18		April 28	April 30	April 28	April 27
1957	Apr 5 Apr 2	Apr 13	April 15	April 11	April 12	April 11
1958	May 11		May 5	May 8	May 9	May 11
1959	Apr 18		April 15	April 17	April 17	April 17
1964	Apr 26		April 25	April 28	April 28	April 29
1965	May 12?	May 4	May 8	May 5	May 5	May 3
1966	Apr 23	Apr 19	April 18	April 19	April 20	April 22
1967	Apr 29	Apr 29	April 19	April 19	April 17	April 18
1968	Apr 12 Apr 26	Apr 24	April 28	April 29	April 28	April 26
1969	May 7 May 10	May 2	May 7	May 10	May 10	May 12

Any comments or suggestions on this paper should be sent to the author.

Meteorological Office
Bracknell
Berkshire

December 1969